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ABSTRACT

Spelling practices, processes, and implications can be analyzed in terms of three conceptual models: the bottom up, the top down, and the interactive compensatory model. Spelling instruction from post-colonial America into the 20th century reveals a preoccupation with the bottom up philosophy, which emphasized rules, word lists, and rote memorization. By the 1950s linguists contended that the majority of words used in writing are regular and consistent in their spelling patterns. Based on the significance of invented spelling, spelling began to be evaluated in developmental stages--prereading, phonetic, orthographic, morphemic and syntactic--which suggest the top down view. This view represents the psychological shift of control to the child (internal) and away from external controls (print, and authority of parent and teacher). The interactive compensatory approach combines both bottom up and top down views and--with its belief in the simultaneous use of phonological information and higher level processing skills--is best represented by the work of Uta Frith and A. F. Jorm. In their observations of the writing practices of preschoolers, C. Read and C. Chomsky concluded that parental acceptance of children's invented spelling is very important as an initial stage in the developmental process of learning to read and write. In school, wide reading and creative writing experiences are the best preparation for improving spelling skills. Spelling is an integral part of the literacy process and should be taught as such in conjunction with real writing and reading lessons. (EL)

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CONNECTING SPELLING INSTRUCTION TO READING AND WRITING

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Introduction:

The relationship between spelling and reading and writing has only recently come under investigation. A plethora of literature exists about reading, reading disabilities and reading instruction. Since the 1970's the work of Donald Murray and Donald Graves has renewed interest in writing. Along with this interest in writing has come a new interest in investigating the spelling process. Nevertheless the link among spelling, reading and writing still remains to be explicated.

The most thorough work in conceptualizing the literacy process has been done in the area of reading. Today there exist three primary theoretical models. Bottom Up reading theorists (Gough, 1972; La Berge & Samuels, 1974) believe that all students must master certain essential skills in a prescribed sequential order to become proficient readers. The external influence of the printed page and instructional practices determine the reader's behavior. In contrast, Top Down theorists (Goodman, 1970; Smith, 1971) argue that the process begins with the knowledge and experiences of the reader and is guided internally. A third view, that of the Interactive Compensatory model (Rumelhart, 1977; Stanovich, 1980) contends that it is the interaction and synthesis between higher and lower order processes that allows a simultaneous processing of information from several sources. The purpose of this paper is to analyze spelling practices, processes and implications in terms of these three conceptual models.

Historical Background:

A brief look at the historical foundations of spelling instruction reveals an early preoccupation with the Bottom Up philosophy. The preeminent educator in post colonial America was Noah Webster (1758-1843). Beginning in 1783, Webster, a school teacher from Goshen, New York, wrote and later

evised a dictionary, a grammar, a reader and a speller. The latter was called the American Spelling Book but was popularly referred to as the "blue-backed speller." Webster's book emphasized rules, word lists and rote memorization. His texts remained the most influential materials in America's classrooms for the next 100 years (Hodges, 1977).

The Bottom Up philosophy emphasizing drill, repetition and memorization of sequentially graded word lists continued into the 20th century. Word lists such as the Basic 10,000, compiled by Ernest Horn (1926) were widely used in the schools. These lists were based on frequency of use counts taken from adult writings and ignored the actual words children used in their own writing. This was partially remedied by the Rinsland Speller (Rinsland, 1945) which used a mastery list of 3,000 words selected from the writings of children in grades two through eight. But its primary instructional technique still advocated the use of rote memorization and the separation of spelling instruction from creative writing.

Influence of Linguistics:

By the 1950's the prevailing view among educators was that the rote memorization of individual words was still necessary because English spelling, with its foreign word borrowings, silent letter combinations and schwa sounds was highly erratic and therefore unpredictable. However some linguists, such as Paul Hanna of Stanford University, argued that our spelling system contained definite patterns based on a finite number of phoneme-grapheme relationships. The latter, linguists contended, could be understood and applied by children in their writing. Utilizing computers, Hanna was able to demonstrate that (1) the majority of words used in writing are regular and consistent in their spelling patterns and (2) even among the roughly 20% irregular words or so-called demons there are more regular elements than

irregular. For example, in the word "women" only the short /i/ sound in the first syllable is irregular in its spellings (Hanna, Hodges and Hanna, 1971).

The application of linguistic theory to spelling instruction suggested a new conceptual model of spelling more akin to the Top Down and Interactive Compensatory views. For example, the early research of Charles Read and Carol Chomsky caused educators to now re-evaluate spelling in developmental terms, similar to the stages of language acquisition. Read (1971) is well known for his studies of preschool writers. An analysis of their writing samples led Read to note the common use of a particular primitive phonetic spelling known as "invented" spelling. Chomsky (1970, 1971) also studied the invented spellings of preschoolers and analyzed their phonetic characteristics. The work of Read, Chomsky and others legitimized the notion of invented spelling as a natural developmental linguistic stage of writing. Further research by Paul (1976), Henderson (1980) and Gentry (1981) confirmed the Top Down belief that many children arrive at the discovery of the phonological system of spelling without being formerly taught the relationship between vowels and consonants in words.

The recognition of the significance of invented spelling led linguists to observe older students as they progressed in their spelling. This progression they described in terms of the following developmental stages.

Stage 1 - Pre-Reading: At the prephonetic level the preschool child's spelling lacks sound symbol relationship and instead employs random letters to represent words. At the phonetic level only consonants are approximated correctly (e.g. hm = home).

Stage 2 - Phonetic: Children in grades 1-3 utilize consonants correctly but vowels are either misused or omitted. Invented spellings are still common here as children are still experimenting with letters and words (e.g. trep = trip).

Stage 3 -Orthographic: Children in grades 2, 3, 4 (overlap with phonetic stage) show more consistent use of vowels within syllables. Problems still remain with double consonants (e.g. ridder = rider), schwa sounds and silent letters.

Stage 4 - Morphemic and Syntactic: By grades 5 and 6 the child is beginning to understand that English spelling is dependent upon morphological and syntactical constraints as well as phonological ones. The student learns for example that similar words like "photograph" and "photography," although they shift their pronunciation from long to short sound, still retain the same spelling. It is significant to note that consistent accuracy in spelling can not really be expected until stage four (Beers and Beers, 1981).

Top Down View of Spelling:

The concept of developmental stages in spelling suggests the Top Down view. Both Read and Chomsky correctly identified invented spelling as a natural, spontaneous effort by a child taking the first small steps towards literacy. Further development in spelling during the primary grades appears to be a matter of trial and error and problem solving which is similar to the view taken by psycholinguists in explaining the reading process. The instructional implication of this theory also suggests a holistic approach that includes auditory, visual, tactile and kinesthetic experiences incorporating spelling with reading and writing lessons. Further growth in spelling among upper elementary and intermediate grade children occurs through general reading and writing lessons supplemented with specific lessons linking spelling to vocabulary development (synonyms, antonyms, homonyms, etymology lessons). And finally young writers only begin to appreciate the importance of standard spelling as they become more aware of the audiences who most read their writing.

Further support for the Top Down view comes from the notion of control. When young children utilize invented spelling they are creating written language and thus beginning to exercise some control over the print process. As they progress in their control of letters and words there is an increased desire to write and to read what others have written. The psychological shift of control to the child (internal) and away from external controls (print, authority of parent and teacher) is a major difference between the Top Down and Bottom Up beliefs. Futhermore, this developmental process removes spelling from its previous pre-test re-test isolation and inextricably connects it to reading and writing instruction.

Interactive Compensatory View of Spelling:

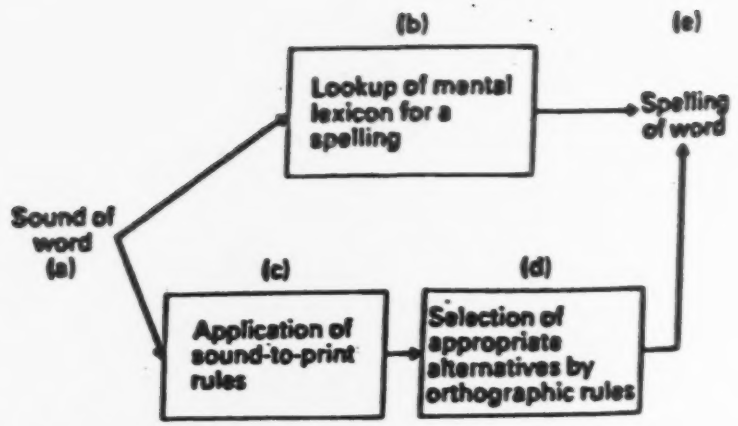
The Interactive Compensatory approach to spelling, which combines both Bottom Up and Top Down views, with its belief in the simultaneous utilization of phonological information and higher level processing skills is best represented by the work of Uta Frith, the British developmental psychologist, and A.F. Jorm, the Australian cognitive psychologist. Both Frith and Jorm concentrated their research on analyzing the differences between good and poor spellers and on how the spelling process relates to reading.

In one study, Frith (1980) had her subjects (good readers/good spellers; good readers/poor spellers; poor readers/poor spellers) perform a variety of reading and spelling tasks. In the latter she classified their spellings as either phonetically accurate or phonetically inaccurate. Frith's findings showed that orthographic knowledge was necessary for good spelling and that such knowledge is acquired primarily through reading. Children who experience difficulty in print to sound conversion while reading, she argued, are denied the necessary information they later need to become good spellers. Furthermore, Frith found that whereas a child may be a good reader using only

partial clues from print (due to redundancy and sequential constraints in language), such a strategy does not hold for spelling because the latter is a sequential linear process requiring the use of all appropriate cues (i.e. letters). Thus Frith contends that though the phonological component may not be crucial for reading, by utilizing it while reading it aids the child in spelling, where it is crucial.

A.F. Jorm similarly studied youngsters with specific reading disabilities, specific spelling disabilities, and those who were disabled in both areas. Although there were some exceptions, his main conclusion was that "...children with spelling difficulties generally have problems with reading as well." (1983, p.4) Thus remediational procedures need to account for both areas together.

To better understand the relationship between spelling and reading Jorm created a theoretical model to explain the spelling process. First, when a person recalls the sound of a particular word he wishes to spell two avenues are open to him: (1) examine the mental lexicon of stored words we all carry in our heads and (2) examine the stored sound to print spelling rules. The first allows us to spell familiar words almost automatically and compare irregular words with similar, more familiar ones. The second route is more complex because most English sounds are represented by several different print forms. For example, the sound of /t/ can be written as t or tt; the sound of /k/ can be written as c, k, ck or ch.; the sound of /s/ can be written as s, c, or ss. And only one appropriate spelling must be selected from among the alternatives. Jorm's contention is that both avenues can be tapped simultaneously to arrive at the correct spelling of a word. (See diagram.)



A. F. Jorm, 1983, p. 98

This model clearly suggests that memorizing spelling rules are only useful when combined with a mental lexicon and the cognitive ability to select the appropriate rule among many alternative rules. Aiding the speller in this process is the fact that the English language spelling system is limited in its alternatives. These limitations are known as language constraints. Positional constraints tell us which letter combinations are acceptable in which position in a word. For example, "ckat" is not an acceptable spelling for /cat/, because 'ck' represents the sound of /k/ only at the end of words. Grammatical function constraints limit certain bound morpheme combinations. For example, we spell the word "kicked" rather than "kickt" because "ed" indicates the past tense of verbs; similarly the correct spelling is "dogs" rather than "dogz" because "s" not "z" is the plural noun marker. Note that at the strictly phonological level "kickt" and "dogz" appear to be accurate representations. Finally, historical constraints utilize knowledge of etymological word derivations to help predict spelling. For example, in words known to be derived from the Greek, the sound /k/ is written

as "ch" in chaos, cholera and psychology, but in words of Roman origin the sound of /k/ is written as "c" in compose, concert and concord. (p. 97).

Through Jorm's conceptualization of the spelling/reading process there is the implicit notion of prediction (from Top Down theory) and the simultaneous utilization of our mental lexicon and system of orthographic rules (from Interactive Compensatory theory).

Future Instructional Implication

In their observations of the writing practices of preschoolers, Read and Chomsky both concluded that parental acceptance of children's invented spelling is very important. However, it is difficult for parents to resist the temptation to correct their preschooler's spelling. Yet the research clearly supports the use of invented spelling as an initial stage in the developmental process of learning to read and write.

In school wide reading and creative writing experiences are the best preparation for improving spelling skills. Primary grade children should be encouraged to write and apply their spelling skills in letters to their parents, in titles for their drawings, in short stories and poems. Elementary grade children should be given time during the school day for free independent reading and encouraged to keep regular writing journals where they can express their thoughts and feelings. Creative writing assignments along with research papers and book reports should be an integral part of each week, replacing the isolated drill exercises in workbooks and ditto sheets. As Ronald Cramer succinctly puts it:

> "Spelling achieves functional meaning only through writing. The final test of good spellers is how well they spell words in compositions, not how well they spell words on tests or in spelling bees (1978, p. 104-105)."

Spelling instruction has come a long way since the days of extensive drill on word lists in isolation. No longer a separate entity in itself, spelling is today recognized as an integral part of the literacy process and should be taught as such in conjunction with real writing and reading lessons.

References

Beers, C. and Beers, J. (1981). Three assumptions about learning to spell. Language Arts, 58, 3 573-580.

Chomsky, C. (1970). Reading, writing and phonology. Harvard Educational Review, 40, 5 296-299.

Cramer, R.L. (1978). Children's writing and language growth. Columbus, Ohio: Charles E. Merrill.

Frith, U. (1980). Unexpected spelling problems. In U. Frith (Ed.) Cognitive Processes in Spelling (p. 495-515) London: Academic Press.

Gentry, J.R. (1981). Learning to spell developmentally, The Reading Teacher, 34, 378-381.

Goodman, K.S. (1970). Reading: A psycholinguistic guessing game. In H. Singer and R.B. Ruddell (Eds.) Theoretical Models and Processes of Reading. Newark, Delaware: International Reading Association.

Gough, P.B. (1972). One second of reading. In J. F. Kavanaugh and I. G. Mattingly (Eds.) Language by Ear and by Eye. Cambridge: M.I.T. Press.

Hanna, P., Hodges, R., and Hanna, J. (1971). Spelling: structure and strategies. Boston: Houghton Mifflin.

Henderson, E. (1980). Developmental concepts of word. In E. Henderson and J. Beers (Eds.) Developmental and Cognitive Aspects of Learning to Spell: A Reflection of Word Knowledge. Newark, Delaware: International Reading Association.

Hodges, R.E. (1977). In Adam's fall: a brief history of spelling instruction in the United States. In H. A. Robinson (Ed.) Reading and Writing Instruction in the United States: Historical Trends. Newark, Delaware: International Reading Association.

Horn, E. (1926). A basic writing vocabulary. University of Iowa Press.

Jorm, A.F. (1983). The psychology of reading and spelling disabilities. London: Routledge and Kegan.

La Berge, D. and Samuels, S.J. (1974). Toward a theory of automatic information processing in reading. Cognitive Psychology. 6, 293-323.

Paul, R. B. (1976). Invented spelling in kindergarten. Young Children, 31, 195-200.

Read, C. (1971). Pre-school children's knowledge of English phonology. Harvard Educational Review, 41, 1-34.

Rinsland, H.A. (1945). A basic vocabulary of elementary school children. New York: MacMillan Pub. Co.

Rumelhart, D.E. (1977). Toward an interactive model of reading. In S. Dornic (Ed.) Attention and Performance VI. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Smith, F. (1971). Understanding reading: A psycholinguistic analysis of reading and learning to read. New York: Holt, Rinehart and Winston.

Stanovich, K. (1980). Toward an interactive-compensatory model of individual difference in reading fluency. Reading Research Quarterly, 16, 32-71.